

## **Air Resources Board**

## Gray Davis Governor

## Alan C. Lloyd, Ph.D. Chairman

1001 I Street • P.O. Box 2815 • Sacramento, California 95812 • www.arb.ca.gov

DATE: February 5, 2003

TO: ALL INTERESTED PARTIES

SUBJECT: NOTICE - HEAVY-DUTY DIESEL ENGINE SOFTWARE UPGRADE

**WORKSHOP** 

A workshop will be held to discuss the Air Resources Board (ARB) staff's initial concepts of a regulatory proposal to require a heavy-duty diesel engine software upgrade for applicable model year 1993 to 1998 engines. This software upgrade will reduce the excess pollution from 1993 to 1998 trucks and buses.

In the 1990's, engine manufacturers utilized computer-based strategies on engines in trucks, school buses, urban buses, and motor homes that allowed the engines to comply with emission limits under certification conditions but also allowed increased oxides of nitrogen (NOx) emissions during highway driving. The United States Environmental Protection Agency (U.S. EPA) and ARB consider these strategies to be defeat devices (a.k.a. dual mapping and transient sensing algorithms) that result in offcycle emissions.

In 1998, the following manufacturers signed Consent Decrees with the U.S. EPA, the Department of Justice (DOJ), and the ARB: Caterpillar, Cummins, Detroit Diesel, Navistar, Mack/Renault, and Volvo. The Consent Decrees stipulate penalties, additional certification requirements, the Low NOx Rebuild Program, an October 2002 deadline for meeting 2004 model year standards, in-use testing, and offset and incentive programs.

The Low NOx Rebuild Program contained in the Consent Decrees is simply engine software upgrades, applicable to specified 1993 through 1998 model year electronically-controlled engines, designed to reduce the increased NOx emissions. The Consent Decrees require low NOx rebuild kits to be installed at the time of normal engine rebuild (typically around 200,000 to 300,000 miles of service.) The engine manufacturers have complied with the provisions of the Low NOx Rebuild Program by providing the low NOx rebuild kits (i.e. engine software) to dealers and distributors. However, less than four percent of the applicable engines have low NOx rebuild kits installed instead of the nearly one hundred percent that was expected. As diesel engines have become

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California Environmental Protection Agency

Software Upgrade Workshop February 5, 2003 Page 2

increasingly durable, fewer rebuilds are being performed or are performed at higher mileage intervals. Therefore, excess NOx emissions continue to be emitted. In order to reduce NOx emissions, staff is developing a proposal to require engine software upgrade on all applicable model year 1993 to 1998 engines.

Staff will introduce their concepts for requiring engine software upgrade on applicable 1993-1998 heavy-duty engines at the workshop and give the opportunity to original engine manufacturers, dealers and distributors, trucking industry representatives, environmental groups, and the public to comment on the proposed ideas. The workshop will be held at the time and location shown below:

Date: February 24, 2003
Time: 1:30 p.m. to 3:30 p.m.
Location: Cal/EPA Building

Sierra Hearing Room

1001 "I" Street

Sacramento, California 95814

If you would like to make a formal presentation during the workshop or if you have special accommodation or language needs, please contact Ms. Lisa Jennings, Planning and Regulatory Development Section, at (916) 322-6913 or <a href="mailto:ljenning@arb.ca.gov">ljenning@arb.ca.gov</a>. In the interest of time, presentations should be limited to ten minutes. TTY/TDD/Speech-to-Speech users may dial 7-1-1- for the California Relay Service.

Sincerely,

/s/

Tom Cackette
Chief Deputy Executive Officer